THE INVENTION CLAIMED IS:

1. A method for manufacturing a switch device, the method comprising:

providing two substrates collectively including a fluid conductor switch device structure and a trench surrounding the fluid conductor switch device structure;

depositing an inner seal material on one of the substrates;

depositing an outer seal material in the trench;

joining the substrates to one another using the inner seal material; and

forming a peripheral hermetic seal between the substrates using the outer seal material.

2. The method of claim 1, in which:

the trench is located in one of the substrates; and

the method additionally comprises:

depositing a first bonding film on the other of the substrates opposite the trench; and

forming the peripheral hermetic seal includes wetting the first bonding film with the outer seal material.

3. The method of claim 2, in which wetting the first bonding film with the outer seal material includes melting the outer seal material to wet the first bonding film.

4. The method of claim 1, in which:

the trench is located in one of the substrates; and

the method additionally comprises:

depositing a first bonding film in the trench,

depositing a second bonding film on the other of the substrates opposite the trench;

depositing the outer seal material in the trench includes depositing the outer seal material on the first bonding film; and

forming a peripheral hermetic seal includes melting the outer seal material to wet the first and second bonding film.

5. The method of claim 1, in which joining the substrates together includes applying pressure to the inner seal material.

6. The method of claim 5, in which joining the substrates together additionally includes applying heat to the inner seal material.

7. A method for manufacturing a switch device comprising:

depositing an inner seal material on a first substrate;

forming a channel through the inner seal material into the first substrate;

forming a peripheral trench around and through the inner seal material into the first substrate;

depositing an outer seal material in the peripheral trench;

providing a second substrate;

disposing a fluid conductor and a fluid non-conductor into the channel;

forming electrodes to the channel;

sealing the inner seal material to bond to the first and second substrates; and

sealing the outer seal material to bond to the first and second substrates.

8. The method as claimed in claim 7, additionally comprising:

depositing a first bonding film in the peripheral trench and bonded to the first substrate;

depositing the outer seal material in the peripheral opening on the first bonding film;

depositing a second bonding film on the second substrate around the periphery thereof;

placing the first and second substrates having the first and second bonding films oppositely positioned along the peripheries of the first and second substrates; and

pressure and heat sealing the inner and outer seal materials.

9. The method as claimed in claim 7 wherein:

forming the channel forms a plurality of channels through the inner seal material into the first substrate;

forming the peripheral trench forms the peripheral trench around and isolating the plurality of channels;

disposing the fluid conductor includes disposing the fluid conductor into the plurality of channels;

disposing the fluid non-conductor includes disposing the fluid non-conductor into the plurality of channels;

forming the electrodes forms a plurality of electrodes to the channel; and

dicing the first and second substrates along the peripheral opening to form a plurality of devices including the switch device.

10. The method as claimed in claim 7 wherein:

forming a chamber through the inner seal material into the first substrate, the chamber connected to the channel; and

positioning an actuating element in the chamber.

11. A switch device, comprising:

a first substrate;

a second substrate opposite the first substrate, the second substrate and the first substrate collectively including:

a fluid conductor switch device structure, and

a trench surrounding the fluid conductor switch device structure;

inner seal material sandwiched between the first and second substrates; and

outer seal material located in the trench and bonded to the first and second substrates.

12. The switch device of claim 11, in which:

one of the two substrates has a trench provided therein;

the switch device additionally comprises a first bonding film on the substrate having the trench provided therein and a second bonding film on the other of the substrates opposing the trench; and

a peripheral hermetic seal includes the first bonding film bonded with the outer seal material.

13. The switch device of claim 11, in which:

one of the substrates has the trench provided therein;

the switch device additionally comprises:

a first bonding layer in the trench, and

a second bonding layer on the other of the substrates opposite the trench; and

a peripheral hermetic seal includes the outer seal material bonded to the first and second bonding layers.

14. The switch device of claim 11, in which the two substrates are bonded together by the inner seal material.

15. A switch device comprising:

a first substrate having a channel and a peripheral trench provided therein, the channel encircled by the peripheral trench;

a second substrate opposite to the first substrate;

an inner seal material on a first substrate bonded to and bonding the first and second substrate;

an outer seal material in the peripheral trench bonding the first and second substrate;

a fluid conductor in the channel;

a fluid non-conductor in the channel; and

electrodes to the channel.

16. The switch device as claimed in claim 15 additionally comprises:

a first bonding film in the peripheral trench and bonded to the first substrate;

the outer seal material in the peripheral trench bonded to the first bonding film;

a second bonding film on the second substrate around a periphery thereof;

the first and second substrates having the first and second bonding films adjacently positioned along the peripheries of the first and second substrates; and

the outer seal material bonded to the first and second bonding films.

17. The switch device as claimed in claim 15 wherein:

the first substrate includes a plurality of channels provided therein, the plurality of channels encircled and isolated by portions of the peripheral trench; and

the switch device additionally comprising:

further fluid conductor in the plurality of channels;

further fluid non-conductor in the plurality of channels; and

a plurality of electrodes to the plurality of channels.

18. The switch device as claimed in claim 15 wherein:

the inner seal material provides a high-pressure seal and a first hermetic seal; and

the outer seal material provides a second hermetic seal.

19. The switch device as claimed in claim 15 wherein:

the first substrate has a chamber provided therein, the chamber connected to the channel;

an actuating element is in the chamber; and

the inner and outer seal materials and the first and second substrates enclose the actuating element and the chamber.

20. The switch device as claimed in claim 15 wherein:

the first substrate has first and second chambers provided therein, the first and second chambers connected to the channel;

an actuating element is in the first and second chambers; and

the inner and outer seal materials and the first and second substrates enclose the actuating element and the first and second chambers.